

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007554**Date Inspected:** 28-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng, Yu Dong Ping**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Outside Yard at Vertical Mill:

The QA Inspector randomly observed the vertical mill was in operation and that milling was being performed simultaneously on Skin Plates A through E at the top of Lift 1 East Tower Shaft at elevation 50.30 M and Skin Plates A through E at the bottom of Lift 2 East Tower Shaft at elevation 50.30 M.

The QA Inspector randomly observed that no contract work was being performed in the interior or on the exterior of or Lift 2 East Tower Shaft. The attached photographs provide additional detail.

Heavy Equipment Shop Bay 10:

The QA Inspector randomly observed 2 ZPMC helpers utilizing angle grinders to blend the overlay on the ends of the longitudinal stiffeners and the outside stiffeners on the base of Lift 1 North Skin C.

The QA Inspector randomly observed ZPMC welder ID 040261, utilizing the Flux Cored Arc Welding (FCAW) Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-57A. The QA Inspector

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randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 048784, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-50A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 053869, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-43A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040533, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-34A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 048267, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-60A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040343, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-35A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040345, utilizing the Flux Cored Arc Welding (FCAW) Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 South Tower Shaft at WJ SSD1-FASA4-1E/F-47A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

Heavy Equipment Shop Bay 11:

The QA Inspector randomly observed ZPMC welder ID 067993, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2G (Horizontal Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-345-SMAW-2G (2F)-Repair, to weld a repair to Weld Joint (WJ) WSD1-A423A/H-1A/B for Lift 2 West Tower Shaft per ZPMC Weld Repair Request (WRR) T-WR1705. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector performed a 100% Visual Testing (VT) Inspection of the welds attaching the fit lugs and longitudinal stiffeners on Skin E to the 18M Diaphragm and the 18M Diaphragm to Skin E of Lift 1 West per

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ZPMC NDT Notification Sheet 003534. There was one area in a cope on the 18M Diaphragm to Skin E that required some grinding and 2 areas that had been marked up for grinding previously by ZPMC QC, that had not been overlooked. A ZPMC helper utilized a pencil grinder and an angle grinder to re-work the 3 areas. There appeared to be no indications after the re-work and the QA Inspector accepted the above listed welds.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 13482570045, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
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Reviewed By:	Clifford,William	QA Reviewer
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